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U. S. Department of Education
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Working Paper Series

National Education Longitudinal Study of 1988: Conducting Trend Analyses of NLS-72, HS&B, and NELS:88 Seniors

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January 1995

FOREWORD

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NATIONAL EDUCATION LONGITUDINAL STUDY OF 1988:

CONDUCTING TREND ANALYSES OF NLS-72, HS&B, AND NELS:88 SENIORS

Prepared for

National Center for Education Statistics
U.S. Department of Education
Washington, DC

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Preface

The NCES National Education Longitudinal Studies (NELS) program is a long-term effort that now encompasses the educational experience of youth from three decades – the 1970s, 1980s, and 1990s. The general aim of the NELS program is to study the educational, vocational, and personal development of students at various grade levels, and the personal, familial, social, institutional, and cultural factors that may affect that development. The NELS program currently consists of three major studies: the National Longitudinal Study of the High School Class of 1972 (NLS-72); High School and Beyond (HS&B of 1980); and the National Education Longitudinal Study of 1988 (NELS:88).

The three NELS data sets are designed to address questions about educational excellence and equity. NELS data inform decision-makers, educational practitioners, and parents about the changes in the operation of the educational system across time, and the effects of various elements of the system on the lives of the individuals who pass through it. NLS-72, HS&B and NELS:88 explore a number of areas that define the basic outcome variables of the NELS series–those related to cognitive growth, occupational expectations and achievement, and personal and social development. Information has been gathered as well on numerous independent variables, such as standard demographics, and variables measuring educational support, parent's socioeconomic status, family composition, language use, and home environment. The core of intervening variables encompasses school experiences such as exposure to given curriculum content and structure, assessment and evaluation systems, social relations, school behavior, and participation in extracurricular activities. Comparisons of high school students at different points in time can help to address critical issues of educational achievement and equality of educational opportunity, such as the following:

> Has the quality of education in American high schools improved or deteriorated over the past ten and twenty years?
>
> What particular school and student variables are related to any changes that may have taken place?
>
> Which of these variables are manipulable, that is, can improve policies and practices so that higher levels of achievement, increased rates of school completion, and a better quality of educational experience will result?
>
> Is there a narrowing of the gap between different gender, racial/ethnic, and socioeconomic status groups in such basic educational outcomes as tested achievement and persistence in school?
>
> Is equally high quality schooling received by different gender, socioeconomic and racial/ethnic groups? What policies and practices have proved most effective over the years in bringing about higher levels of educational opportunity for all?

There has been much public discussion of and concern about American education in the two decades during which the NELS data have been gathered. Scores on standardized achievement tests declined in the 1960s and 1970s. The tested achievement of non-Asian minority groups has lagged considerably behind the test scores of whites and Asians. International comparisons of test results have heightened public anxiety about whether American schools are achieving as much as they can, or as much as they need to achieve to maintain the nation's international economic competitiveness. Major efforts to improve schooling in the United States were undertaken in the 1980s and continue at this time. The

breadth and depth of the NELS data sets--which contain a substantial body of student questionnaire data as well as test results, and an array of additional information ranging from school records to parent, teacher, and school administrator reports--provide a deepened picture of the educational processes that contribute to the achievement trends of the last two decades, and a deepened understanding of the interplay between school factors and community and family context in influencing educational results. The NELS data sets provide as well a body of rich information on post-high school outcomes that can be related to educational antecedents studied in the earlier data collections of each study, and which thus help to clarify the consequences for individuals and society of trends in achievement and persistence in the nation's elementary and secondary schools.

This monograph discusses opportunities for drawing comparisons across the cohorts that comprise NLS-72, HS&B, and NELS:88, as well as some of the differences in survey content and design that may limit the possibility of drawing valid comparisons. Two companion monographs discuss other trend comparisons that can be made using NELS:88 data. One volume--*Conducting Trend Analyses of HS&B and NELS:88 Dropouts*--expands on the more specialized topic of the ways in which HS&B sophomore cohort and NELS:88 school leavers may be compared. The other volume--*Conducting Cross-Cohort Comparisons Using HS&B, NAEP, and NELS:88 Academic Transcript Data*--explains how to conduct trend analyses that make use of the 1982, 1987, 1990, and 1992 high school transcript databases.

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Karen Sutherlin of NORC assisted in the final processing of this manuscript. Steven Ingels is the Project Director for the NELS:88 Second Follow-up; Katy Dowd was the Project Manager for the Student, Dropout, and Transcript Components of the Second Follow-up. Peggy Quinn is the NCES Project Officer.

Introduction: NCES's National Education Longitudinal Studies Program

The U.S. Department of Education's National Center for Education Statistics (NCES) is mandated to "collect and disseminate statistics and other data related to education in the United States" and to "conduct and publish reports on specific analyses of the meaning and significance of such statistics" (Education Amendments of 1974-Public Law 93-380, Title V, Section 501, amending Part A of the General Education Provisions Act).

Consistent with this mandate and in response to the need for policy-relevant, time-series data on nationally representative samples of elementary and secondary students, NCES instituted the National Education Longitudinal Studies (NELS) program, a continuing long-term project. The general aim of the NELS program is to study the educational, vocational, and personal development of students at various grade levels, and the personal, familial, social, institutional, and cultural factors that may affect that development. The NELS program currently consists of three major studies: the National Longitudinal Study of the High School Class of 1972 (NLS-72); High School and Beyond (HS&B); and the National Education Longitudinal Study of 1988 (NELS:88). Taken together, these studies represent the educational experience of youth from three decades -- the 1970s, 1980s, and 1990s. Figure 1-1 illustrates the increasing number of issues that have become part of NCES's National Education Longitudinal Studies research agenda. A brief description of these studies follows.

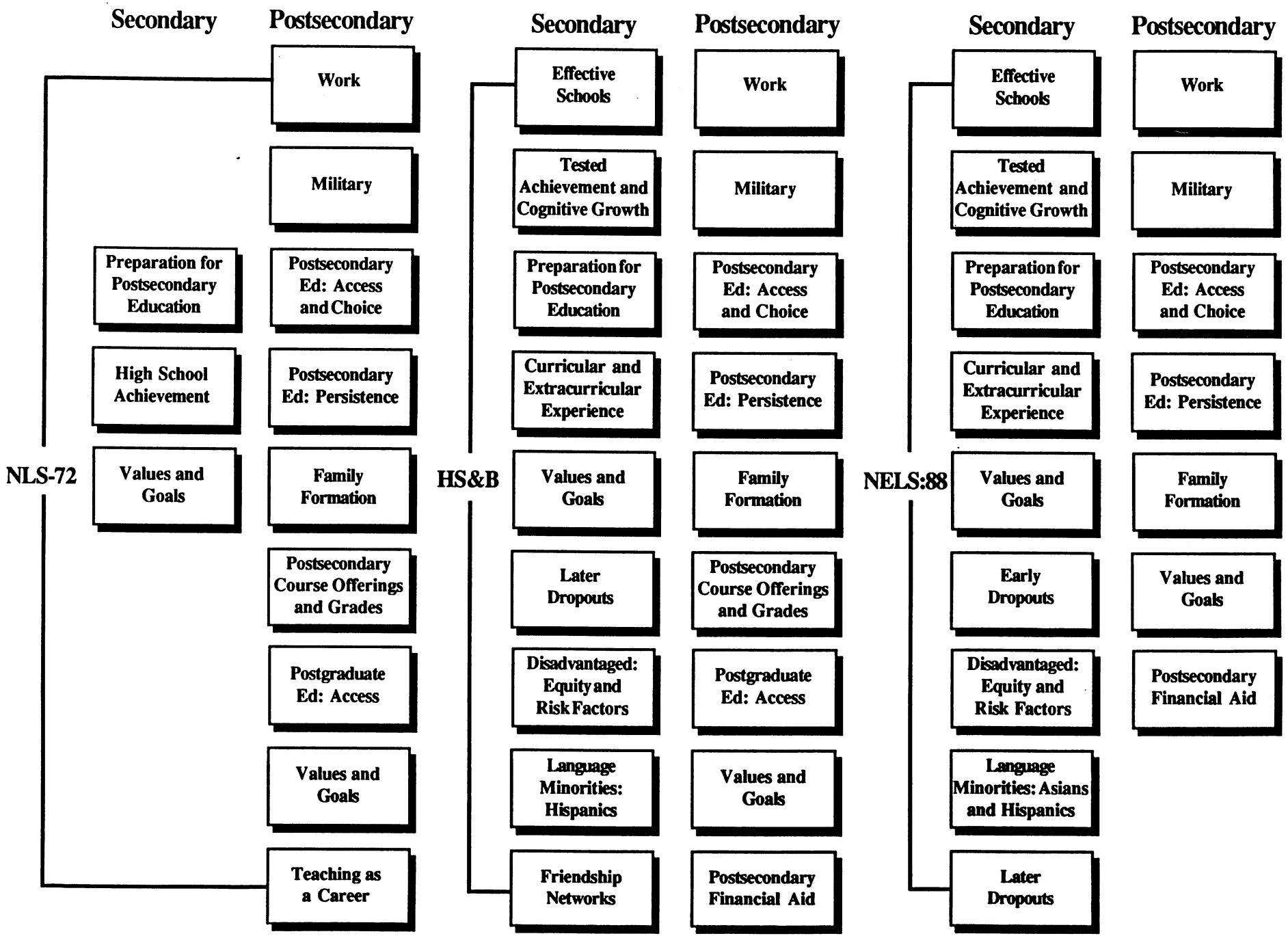
The National Longitudinal Study of the 1970s: NLS-72. The first of the NELS projects, the National Longitudinal Study of the High School Class of 1972 (NLS-72), began in the spring of 1972 with a survey of a national probability sample of 19,001 seniors from 1,061 public, secular private, and church-affiliated high schools. The sample was designed to be representative of the approximately three million high school seniors enrolled in more than 17,000 schools in the spring of 1972. Each sample member was asked to complete a student questionnaire and a 69-minute test battery. School administrators were also asked to supply survey data on each student, as well as information about the schools' programs, resources, and grading systems. Five follow-ups, conducted in 1973, 1974, 1976, 1979, and 1986, have been completed.

In addition to background information, the NLS-72 base year and follow-up surveys collected data on respondents' educational activities, such as schools attended, grades received, and degree of satisfaction with their educational institutions. Participants were also asked about work experiences, periods of unemployment, job satisfaction, military service, marital status, and children. Attitudinal information on self-concept, goals, participation in political activities, and ratings of their high schools are other topics for which respondents have supplied information.

High School and Beyond of the 1980s: HS&B. The next major longitudinal study sponsored by NCES was High School and Beyond. HS&B was initiated in order to capture changes that had occurred in education-related and more general social conditions, in federal and state programs, and in the needs and characteristics of students since the time of the earlier survey. Thus, HS&B was designed to maintain the flow of education data to policymakers at all levels who need to base their decisions on data that are reliable, relevant, and current.

Base year data collection was conducted in the spring of 1980. Students were selected using a two-stage probability sample with schools as the first-stage units and students within schools as the second-stage units. Unlike NLS-72, HS&B included cohorts of both tenth and twelfth graders. Since

Figure 1-1: Development of key research issues for the NCES National Education Longitudinal Studies Program



the base year data collection in 1980, four follow-ups of the HS&B cohorts have been completed: one in the spring of 1982; one in the spring of 1984; one in the spring of 1986, and (for the sophomore cohort only) one in the spring of 1992.

The four NELS program cohorts (NLS-72 seniors, the HS&B sophomores and seniors, and NELS:88 eighth graders) are displayed in Figure 1-2 according to their initial and subsequent survey years and their modal age at the time of each survey. As illustrated, NLS-72 seniors were first surveyed in 1972 at age eighteen and have been resurveyed five times since, with the last survey occurring in 1986, when these respondents were about thirty-two years of age. The HS&B cohorts have been surveyed at points in time that would permit as much comparison as possible with the time points selected for NLS-72.

The National Education Longitudinal Study of 1988. The **base year** of the National Education Longitudinal Study of 1988 (NELS:88) represented the first stage of a major longitudinal effort designed to provide trend data about critical transitions experienced by students as they leave elementary school and progress through high school and into postsecondary institutions or the work force. The base year study, conducted in the spring term of the 1987-88 school year, selected 26,432 potential eighth grade participants, of whom 24,599 were successfully surveyed in 1,052 public and private schools. Additional data were gathered from eighth graders' parents, teachers, and principals.

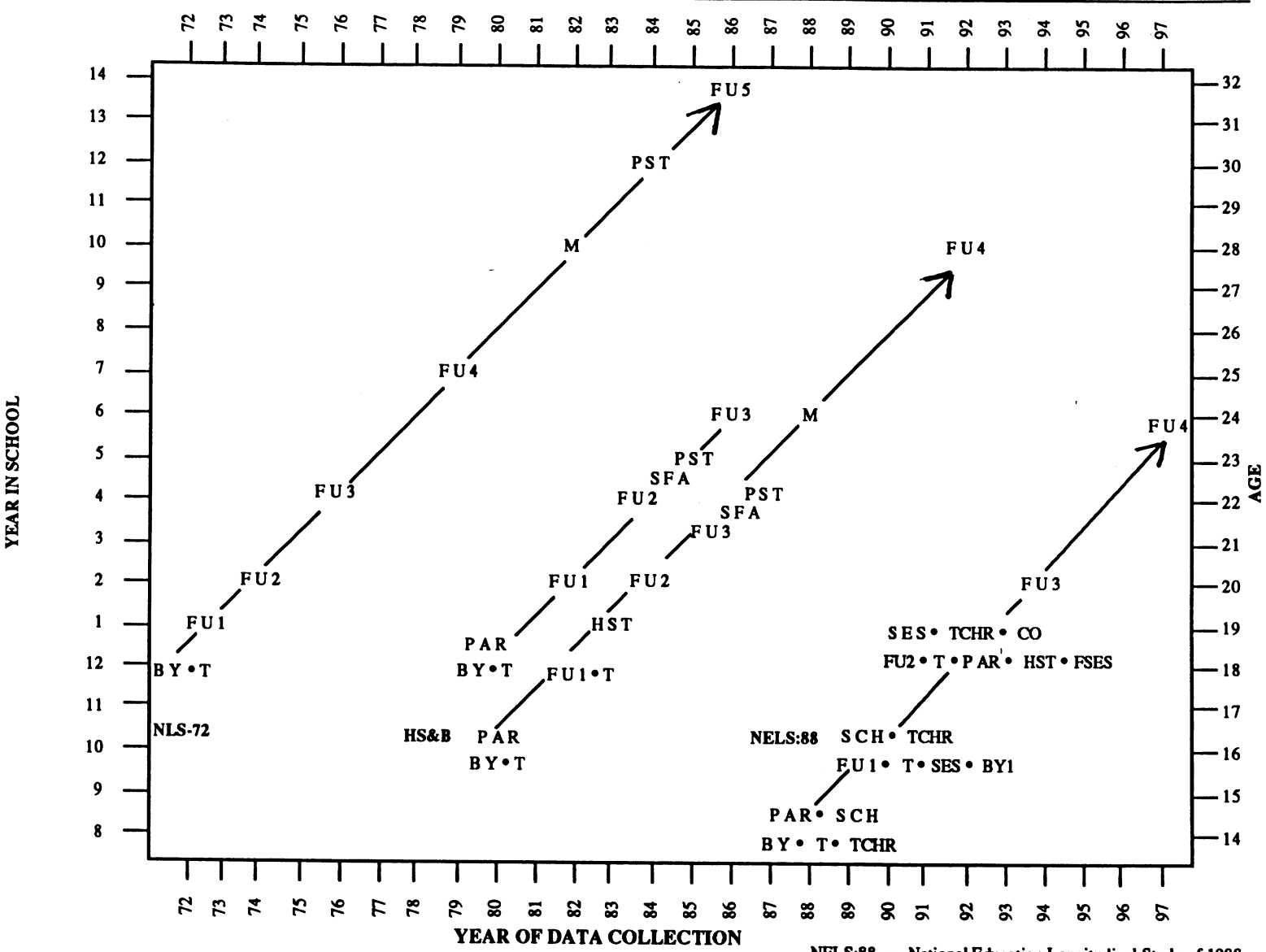
The **first follow-up** in 1990 provided the first opportunity for longitudinal measurement of the 1988 baseline sample. It also provided a comparison point to high school sophomores ten years before, as studied in HS&B. The study captured the population of early dropouts (those who leave school between the end of eighth grade and the end of tenth grade), while monitoring the transition of the student population into secondary schooling.

The **second follow-up** took place in 1992, when most sample members entered the second term of their senior year. The second follow-up provides a culminating measurement of learning in the course of secondary school, and also collects information that will facilitate investigation of the transition into the labor force and postsecondary education after high school. Freshening[1] the NELS:88 sample to represent the twelfth grade class of 1992 makes trend comparisons with the senior cohorts that were studied in NLS-72 and HS&B possible. The NELS:88 second follow-up resurveyed students who were identified as dropouts in 1990, and identified and surveyed those additional students who left school after the first follow-up.

The NELS:88 **third follow-up** is taking place in 1994, at a time when most sample members are in postsecondary education or in the labor force. A major goal of the 1994 round is to provide data for trend comparisons with NLS-72 and HS&B, and to continue cross-wave comparisons with previous NELS:88 rounds. Additionally, the third follow-up will permit researchers to assess the effect of eighth grade and high school curricular experiences on postsecondary education choice. The 1994 follow-up will provide the means by which access of individuals with different backgrounds to different kinds of educational institutions can be examined. The third follow-up will facilitate study of the influences of

[1] The process referred to here as "freshening" added students who were not in the base year sampling frame, either because they were not in the country or because they were not in eighth grade in the spring term of 1988. The 1990 freshening process provided a representative sample of students enrolled in tenth grade in the spring of 1990. The 1992 freshening process provided a representative sample of students enrolled in twelfth grade in the spring of 1992.

Figure 1-2: Research design for the NCES National Education Longitudinal Studies (NELS) program



NLS-72 = National Longitudinal Study of the High School Class of 1972
BY = Base year data collection
FU1 = First follow-up data collection
FU2 = Second follow-up data collection
FU3 = Third follow-up data collection
FU4 = Fourth follow-up data collection
FU5 = Fifth follow-up data collection
M = Maintenance of address date
PST = Postsecondary education transcripts
T = Cognitive test administration

HS&B = High School & Beyond: 1980
BY = Base year data collection
FU1 = First follow-up data collection
FU2 = Second follow-up data collection
FU3 = Third follow-up data collection
FU4 = Fourth follow-up data collection
HST = High school transcripts
M = Maintenance of address date
PAR = Survey of parents
PST = Postsecondary education transcripts
SFA = Student financial aid records
T = Cognitive test administration

NELS:88 = National Education Longitudinal Study of 1988
BY = Base year data collection
BY1 = Base Year Ineligible Study
FSES = Followback Study of Excluded Students
FU1 = First follow-up data collection
FU2 = Second follow-up data collection
FU3 = Third follow-up data collection
FU4 = Fourth follow-up data collection
HST = High school transcripts
CO = Course offerings
PAR = Survey of parents
SCH = School administrator survey
SES = School effectiveness study
T = Cognitive test administration
TCHR = Survey of teachers

high school education experiences on postsecondary education and employment opportunities and choices. Labor force participation, postsecondary persistence, curricular progress, and family formation are further research topics which will be explored by the third follow-up. Additionally, the 1994 survey will provide a basis for assessing how many dropouts have returned to school and by what route, and will measure the access of dropouts to vocational training programs and to other postsecondary institutions. A fourth follow-up is scheduled for 1998.

Cross-sectional and longitudinal analysis. NELS:88 is a longitudinal study. In such a study, a probability sample of a population is drawn at one time (for NELS:88, 1988 eighth graders) and the same individuals are measured at later times (for NELS:88, 1990, 1992, 1994, 1997). In a cross-sectional survey a probability sample is drawn of the population at one point in time.

NELS:88 data can be analyzed longitudinally--one can examine what happens to the eighth grade cohort over time (for example, one can measure gains in mathematics achievement between 1988 and 1992, or who drops out of school between 1988 and 1990). The capacity to measure change in individuals over time is a distinctive strength of the NELS:88 design. Following individual educational histories generally provides the best basis for making causal inference about educational processes and their effects.

The base year of a longitudinal survey is also, by definition, a cross-sectional survey. Hence NELS:88 base year data can also be analyzed cross-sectionally--researchers can look at the situation of a nationally representative sample of eighth graders in 1987-88. NELS:88 has a special sample freshening feature which effectively supplies two additional nationally representative cross-sections: the nation's spring 1990 sophomores, and spring 1992 seniors. Thus the first and second follow-up data can also be analyzed either cross-sectionally or longitudinally.

Cross-sectional data provide a snapshot at a single point in time. The capacity for *longitudinal* analysis--the measurement of individual-level change--is the paramount strength of NELS:88. However, group-level cross-sectional data as well can be employed to measure stability and change over time, *when cross-sections are repeated to form a time series*. NELS:88 provides two examples. (1) Across waves within NELS:88, one can measure group-level change across successive cross-sections--eighth graders in 1988, sophomores in 1990, and seniors in 1992. An instance of this would be examining eighth, tenth, and twelfth grade math scores of Hispanics relative to whites to see if disparities became larger, smaller, or remained the same as grade level increased.[2] (2) *At the intercohort level, one can use a single round of NELS:88 in conjunction with a corresponding population taken from comparable studies (e.g., NLS-72 and HS&B) as repeated cross-sections (e.g. of seniors in 1972, 1980/82 and 1992) to measure trends.* Such cross-cohort analysis is the subject of this monograph.

The three NELS study series--NLS-72, HS&B, and NELS:88--offer a number of possible time points for comparison. The possible comparison points, and the considerations of content and design

[2] This kind of analysis is only appropriate if the phenomenon to be studied is not subject to extremely rapid change, since it does not permit historical trends and grade level differences to be disentangled. Note that this measurement would involve use of three overlapping but non-identical samples. For example, not all eighth graders would progress to tenth grade at time 2 (1990), and to be representative of tenth graders (in 1990) the sample would have to be freshened with individuals who were not eighth graders in 1988, and so on. In contrast, a longitudinal measurement would employ an identical (that is, a single) sample surveyed at three time points--the eighth grade cohort in 1988, 1990, and 1992--following individuals who remain in school regardless of whether they progress in modal sequence, and following individuals who leave school as well, that is, who become dropouts or early graduates.

which may affect the comparability of data across the cohorts, are discussed in detail in the remainder of this monograph. Appendix A documents specific comparison items that appear on the 1972, 1980, 1982, and 1992 high school senior questionnaires. For the convenience of users interested in sophomore cohort comparisons, Appendix B provides a crosswalk between the 1980 HS&B and 1990 NELS:88 student questionnaires.

Conducting Trend Analyses of NLS-72, HS&B, and NELS:88 Seniors: Analytical Implications of Design Differences Between the Studies

This methodology monograph discusses the kinds of comparisons that can be made between NELS:88, HS&B, and NLS-72, and the time points at which these comparisons can be made. This report also points to issues of similarity and difference in sample design and test and questionnaire content. NELS:88 has been specifically designed to facilitate comparisons with NLS-72 and HS&B. At the "student" level, three kinds of comparative analysis are possible (described below and summarized in Table 1).

1) Cohorts can be compared on an *intergenerational or cross-cohort time-lag basis*. Both cross-sectional and longitudinal time-lag comparisons are possible. For example, (1-A) cross-sectionally, NELS:88 1992 results (when restricted to sample members who are seniors) can be regarded as the third in a series of repeated cross-sections of twelfth graders. That is to say, the status of NELS:88 second follow-up seniors in 1992 can be compared to HS&B base year seniors in 1980, and to NLS-72 seniors in 1972. Longitudinally (1-B), change for NELS:88 1990 sophomores two years later (that is, in 1992, when the cohort included both students and dropouts) can be compared to changes measured in 1982 from a 1980 HS&B sophomore baseline.

2) *Fixed time comparisons* are also possible, in which groups within each study are compared to each other at different ages though at the same point in time. Thus NLS-72, HS&B senior cohort and HS&B sophomore cohort sample members could all be compared in 1986, some 14, 6, and 4 years after each respective cohort completed high school. (For example, employment rates in 1986 of 22, 24, and 32-year old high school graduates can be contrasted.) The only available fixed time comparison using NELS:88 data, however, involves contrasting HS&B fourth follow-up and NELS:88 second follow-up 1992 results. One might, for example, compare the 1992 educational expectations of the two cohorts to explore how 17-18 year olds differ from 27-28 year olds in this respect. Or one might utilize the 1992 life values responses (questions concerning the importance to the respondent of being successful in work, having lots of money, having strong friendships, and so on) to compare HS&B Fourth Follow-Up sophomore cohort members with NELS:88 Second Follow-Up survey participants.

3) Finally, *longitudinal comparative analysis* of the cohorts can be performed by modeling the history of the age/grade cohorts.

NELS:88 trend comparisons need not, however, be strictly limited to NLS-72 and HS&B. Comparisons are also possible using transcripts data collected for high school seniors, not only for HS&B 1982 graduates and NELS:88 1992 graduates, but also for 1987 and 1990 graduates in NAEP schools.[3] Other national probability samples as well may provide comparison points.[4]

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[3] Care has been exercised in designing and implementing the academic transcript study in NELS:88 to maximize the comparability of NELS:88 transcript data with the high school transcript data for 1987 and 1990 graduating seniors. While an independent high school transcript study was not conducted in NLS-72, course taking summary information was collected from school records for the 1972 seniors. For a detailed account of cross-cohort transcript comparison issues, see Ingels and Taylor, 1994.

[4] For example, major national studies of high school seniors, employing test and survey measures, were conducted in 1960 (Project Talent) and 1965 (the Equality of Educational Opportunity Survey) (see Schrader and Hilton in Hilton [ed.] 1992 for a discussion of comparability issues); also, the high school graduating classes of 1975-93 have been surveyed (and followed up as young adults) by Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth, a key source of trend data on, in

Table 1: Types of possible NELS:88 trend comparisons to NLS-72 and HS&B

I. Cross-Sectional Comparisons

A. Cross-Cohort Time-Lag Comparisons

1. 1980/1990: 1980 sophomores versus 1990 Sophomores[5]
2. 1982/1992: 1980 Sophomores Two Years Later versus 1990 Sophomores Two Years Later
3. 1979/80-82 Continuous High School Careers of 1980 Sophomores versus 1989/90-1992 Continuous High School Careers of 1990 Sophomores: Transcript Comparison
4. 1972/1980/1992: 1972, 1980 and 1992 Seniors[6]
5. 1972/1982/1992: High School Seniors; Adjustment for nonrepresentativeness of 1982 senior sample[7]
6. 1974/1982(1984)/1994: High School Seniors Two Years Later
7. 1984/1994: High School Sophomores Four Years Later
8. 1986/1998: High School Seniors Six Years Later

B. *NELS:88 Fixed-Time Comparison to HS&B:*

HS&B 1992 (fourth follow-up, ten years out of high school) versus NELS:88 1992 (second follow-up, modal grade = high school senior)

II. Longitudinal Comparisons

Longitudinal comparative analysis of the four cohorts can be performed by modeling the history of the age/grade cohorts. (Also, comparisons IA[2] above, involving use of change data in a time-lag comparison, may be viewed as having a longitudinal dimension.)

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particular, drug use and associated factors. (The study added 8th- and 10th-grade cohorts in 1991). Items that are strictly comparable across such data sets are, however, uncommon. The Longitudinal Study of American Youth (LSAY) collected, starting in 1987, student, parent and teacher data, for a cohort of seventh graders and a cohort of tenth graders (see Miller et al., 1992). Although the data are roughly contemporaneous with those of NELS:88 and the primary emphasis limited to science and mathematics, LSAY contains a number of NELS:88 (and HS&B) comparison items. In contrast to NELS:88's biennial data collections, LSAY provides annual data points that may help to more precisely map trends and demarcate transitions.

[5] Must exclude all NELS:88 students who are non-sophomores and all non-students (dropouts).

[6] Must exclude all NELS:88 second follow-up dropouts (including alternative completers), early graduates, and students who were not spring term 1992 twelfth graders.

[7] NELS:88 conditions as above (seniors only); HS&B must exclude dropouts and non-seniors and statistically adjust for non-representativeness of senior sample.

Possible Time Points for Comparative Analyses

Institution-level comparisons. Comparisons are not limited to cohorts of individuals; not just the student samples, but also the baseline school samples of NELS:88, HS&B, and NLS-72 are nationally representative, and considerable data have been collected about school-level characteristics. However, the only natural comparison points are of NLS-72 (1972) and HS&B (1980) high schools, since the NELS:88 base year school sample was limited to eighth grades.[8]

Table 2: Nationally-representative school samples in NELS program database

	Representative School Sample	Non-Representative School Sample
NLS-72	1972	
HS&B-Sr	1980	
HS&B-So	1980	1982[9]
NELS:88	1988	1990, 1992

[8] However, the 1988 NELS:88 school sample might be compared to other data sets, such as the ongoing series of NCES Schools and Staffing Surveys.

[9] A probability subsample of the 1982 HS&B schools was resurveyed in the 1984 Administrator and Teacher Survey. In an institution-level longitudinal follow-up, these schools were re-surveyed in 1992, as part of the National Longitudinal Study of Schools (NLSS). Unlike HS&B in 1982 and 1984, NLSS freshened the HS&B school sample to make it nationally representative of public and private secondary schools in the United States in 1992.

Table 3: Comparison Points

National Education Longitudinal Studies Program

Students	NLS-72	HS&B-So	HS&B-Sr	NELS:88
G8				1988*
G10		***1980****		***1990****
G12	***1972****	***1982***	***1980****	***1992****
G12 + 1	1973			
G12 + 2	***1974***	***1984***	***1982***	***1994***
G12 + 4	***1976***	***1986***	***1984***	
G12 + 6			***1986***	***1998***
G12 + 7	1979			
G12 + 10		1992		
G12 + 14	1986			
Dropouts				
G10 - G12		***1982***		***1992***
follow-up		***1984*** (1986, 1992)		***1994*** (1998)
Early Graduates		***1982***		***1992***
Parents of seniors[10]			***1980***	***1992***

High School Transcripts Studies

	HS&B	NAEP'87	NAEP'90	NELS:88
Seniors in:	***1982***	***1987**[11]***	***1990****	***1992****

Note: comparison points are in bold italics. Fully representative grade samples are marked by an asterisk. The 1982 and 1987 samples only approximate representative samples of high school seniors.

[10] For a crosswalk between the HS&B and NELS:88 parent questionnaires, see Appendix D of Ingels, Thalji, Pulliam, Bartot & Frankel; for a comparison of the design and implementation of the parent surveys, see section 4.4 of same.

[11] Based on the population of students in eleventh grade and/or age seventeen in 1985-86.

Individual-level comparisons. In Table 3, natural comparison points are highlighted. However, with technical adjustments, comparability can oftentimes be achieved even when age/grade/stage parallelism has not been strictly maintained.[12] In addition, survey rounds that coincide with a grade-representative sample are noted by an asterisk. Thus, HS&B (sophomore cohort) in 1980 and NELS:88 in 1990 are nationally-representative samples of sophomores; NLS-72 in 1972, HS&B (senior cohort) in 1980, and NELS:88 in 1992 comprise nationally representative samples of seniors. The NELS:88 sample was freshened to make it representative of the nation's sophomores (1990) and seniors (1992). Sample freshening was not conducted in HS&B and the sophomore cohort does not constitute a valid probability sample of the nation's 1982 seniors. Nevertheless, 1982 HS&B sophomore cohort and 1992 NELS:88 can be compared, for both examine a nationally representative sample of sophomores two years later--consisting of students (most, but not all of them, seniors), early graduates, and dropouts.[13] HS&B 1982 seniors can also be compared to 1972 NLS-72 and 1992 NELS:88 seniors, though not without some sample and statistical adjustments.[14]

There are two major kinds of differences between NLS-72, HS&B and NELS:88 that must be taken into account. One difference pertains to the sample and research designs; another pertains to differences in questionnaire or cognitive test content that may affect the possibility of drawing valid comparisons. Data users who are familiar with NLS-72 and HS&B will find that despite the considerable similarity between these studies and NELS:88, there are also significant sample definition and statistical design differences. Analysts intending to compare these cohorts should note these differences. Similarly, while some effort has been made to maintain trend items over time, strict test and questionnaire overlap across the three studies is not considerable.

Differences in sample design. The overall sample design for NELS:88 is essentially similar to the design employed in HS&B and NLS-72. In the base year, students were selected through a two stage stratified probability sample, with schools as the first units and students within schools as the second stage units.

In NLS-72, all baseline sample members were spring term 1972 high school seniors. In High School and Beyond, all members of the student sample were spring term 1980 sophomores or seniors. Because NELS:88 began at eighth grade, its follow-ups encompass (like the HS&B sophomore cohort two years later [1982]) students (both in the modal grade progression sequence, and out of sequence) and dropouts. HS&B was designed to provide two separate cohorts--a representative sample of 1980 sophomores and a representative sample of 1980 seniors. NELS:88 is designed to provide a

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[12] See, for example, the account by T.L. Hilton and J.M. Pollack on estimating postsecondary enrollment change over time using NLS-72 fourth follow-up (conducted over 7 years after graduation) and HS&B third follow-up (conducted just less than six years after high school graduation) data, in Hilton (ed.) 1992.

[13] There are a number of special definitional issues in comparing NELS:88 and HS&B dropouts. For a detailed discussion of these issues, see the companion volume to this monograph, *Conducting Trend Analyses: HS&B and NELS:88 Dropouts,* (Ingels and Dowd, National Center for Education Statistics, 1994).

[14] Specifically, out-of-sequence students (non-seniors) and non-students (such as dropouts and early graduates) must be removed from the HS&B analysis sample, and an adjustment made for the exclusion of students who were seniors in 1982 but were not part of the HS&B base year sampling frame, that is, 1982 seniors who were not 1980 sophomores in the U.S. A simplifying assumption here would be that in results and characteristics, these out-of-sequence 1982 seniors are essentially similar to the HS&B 1980 sophomores who failed to progress in the modal grade sequence.

representative sample of 1988 eighth graders, a further representative sample of 1990 sophomores, and finally a representative sample of 1992 seniors. In the High School and Beyond first follow-up, students were not added to the original sample (that is, the 1980 sophomore cohort sample was not freshened in 1982 with seniors who had not been sophomores two years before and who therefore had no chance of selection into the HS&B baseline). However, in NELS:88, owing to the desire to provide sample representativeness at three distinct points in time, new students can enter the study at tenth grade through two routes: sample freshening (addition of 1990 tenth graders who were not 1988 eighth graders or who were not in the United States in 1988) and change of eligibility status.[15]

Thus, while the base year designs of the three studies were essentially similar, because an eighth-grade baseline was chosen for NELS:88 and a high school baseline for NLS-72 and HS&B, two further differences arise when one compares the NELS:88 follow-up rounds with the other studies:

1) the more variable, typically smaller and unrepresentative within-school samples in NELS:88 first and second follow-up as contrasted to the more uniform, larger, and representative within-school student samples of HS&B[16] and NLS-72 (see Table 4).

2) the fact that, unlike HS&B in 1980, NLS-72 in 1972, or NELS:88 in 1988, NELS:88 1990 and 1992 high schools do not constitute a probability sample of schools;

In addition, despite the fundamental similarity of the base year designs, there were some differences in school and subgroup sampling and oversampling strategies across NLS-72, HS&B and NELS:88.[17] Such differences are documented in detail in the various sampling, technical, and comparative analysis reports (listed in the reference section of this document) associated with each study. Such differences have implications for intercohort analysis. For example, the NELS:88 sample of high schools lacks national generalizability; school-level contrasts should therefore not be drawn between 1972 and 1980 high schools in NLS-72 and HS&B, on the one hand, and NELS:88, on the other. Likewise, subtle differences in stratification schemes limit comparisons that can be made. NELS:88 contains an Asian oversample, but HS&B and NLS-72 do not. NELS:88 contains a substantial oversample of non-Catholic private schools, a school type much more thinly represented in the other two studies.

There are special considerations in comparing the NELS:88 and HS&B dropout and early graduate populations. In the NELS:88 second follow-up, dropouts who had obtained alternative credentials such as a GED were administered the student rather than the dropout questionnaire, along with

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[15] For further information on sample freshening, see chapter 3 of the NELS:88 first follow-up or second follow-up student component user's manuals.

[16] The HS&B 1980 sophomore and senior samples are fully in-school representative, but the HS&B sophomore 1982 (first follow-up) sample is not, because transfers into the school had no chance of selection into the sample.

[17] An important additional difference, that may carry some consequences for comparability but will little affect analytic strategies, involves student sample replacement strategies. NLS-72, unlike HS&B and NELS:88, permitted replacement of noncooperating students under certain circumstances. While HS&B and NELS:88 made no attempt to replace students who refused to be part of the survey, HS&B did permit, but NELS:88 did not, replacement of selected students who subsequently died, were discovered to have been listed in error, or who dropped out of school after selection but prior to the survey session. HS&B and NELS:88 also conducted a sample update to accommodate transfers into the baseline schools between the sample selection and data collection phases of the studies.

Table 4: Baseline and senior year student average cluster sizes (*N* sampled and *N* participating), NLS-72, HS&B, NELS:88

	Base Year Average Cluster Size		Senior Year Average Cluster Size		Senior Sample Representative of Seniors/of School
	N Sampled	*N* Partic.	*N* Sampled	*N* Partic.	
NLS-72	17.9	15.7	17.9	15.7	Yes / Yes
HS&B Sr. Cohort	34.9	27.8	34.9	27.8	Yes / Yes
HS&B So. Cohort	35.2	29.6	25.4	24.3	No / No
NELS:88	25.1	23.4	11.4	11.0	Yes / No

Notes: ***NLS-72*** statistics are based on 1,061 participating base-year schools, a student sample of 19,001, with student participation defined as completion of the student questionnaire (there were 16,683 questionnaire completers); see Riccobono, Henderson, Burkheimer, Place & Levinsohn, 1981, p.21. ***HS&B*** statistics reflect 1,015 participating base year schools; a base year sample of 34,981 seniors, of whom 28,240 participated; and a sophomore sample of 35,723, of whom 30,030 participated. In the HS&B first follow-up, the sophomore cohort was subsampled, with most base year nonparticipants removed from the sample. Hence 29,737 sample members were retained, of whom 25,150 were enrolled in 992 HS&B schools; 96 percent of these 25,150 students participated in the HS&B first follow-up. (The remaining 4,587 sample members were surveyed as dropouts, transfers out, or early graduates.) There was also some attrition, owing to mergers and closings, in the school sample (975 base year schools remained in the school sample; additionally, 17 schools that had received pools of base year sample members were included in data collection activities). The 1982 cluster size reported for HS&B in the table above includes seniors and non-seniors because the sophomore cohort in 1982 did not constitute a nationally representative senior sample. ***NELS:88*** second follow-up (1992) statistics are based on sample members who were in the twelfth grade in the spring term of the 1991-92 school year in the contextual sample of schools. There were 15,643 seniors in 1,374 such schools, as well as an additional 378 non-seniors. NELS:88 base year statistics reflect 1,052 participating schools, an eighth grade sample of 26,432, of whom 24,599 participated. The NELS:88 senior sample in the table above is spring-based and therefore excludes early graduates, who should not be included in senior year trend comparisons with NLS-72 and HS&B (though of course the HS&B and NELS:88 early graduate cohorts can themselves be compared).

the early graduate supplement–though classified as completers and appearing on the student data set in NELS:88,GED completers were not part of the student sampling frame for HS&B in 1980 or NLS-72, and therefore must be excluded from trend comparisons of seniors. (In HS&B's first follow-up [1982] such sophomore cohort alternative completers were administered the dropout questionnaire.) Questionnaire assignment in the two studies is summarized in Table 5.

Use of appropriate subgroup membership flags permits the analyst to define dropouts in the same way in both HS&B and NELS:88; however, for respondents such as GED holders, some items that otherwise would be available cannot be compared because the dropout questionnaire was not administered to this group in NELS:88. On the other hand, NELS:88 GED recipients should be excluded from comparison with HS&B early graduates. It is also possible to manipulate HS&B data so that a non-HS&B dropout definition is used, in which individuals in non-diploma alternative arrangements are *not* regarded as dropouts. (For details, see Ingels and Dowd, 1994).

Overall differences in cluster size are summarized in Table 4. For NLS-72, the target sample size was 18 students per school; for the HS&B base year, the target was 36 students per school; and for NELS:88, the target sample size was 24 eighth graders (or 26.2, counting the Asian-Hispanic oversample). Numbers selected and participating for the baseline and senior surveys of the three studies are summarized in Table 4.

NLS-72, HS&B, NELS:88 Content Overlap. Content (and format) overlap across the three studies should be viewed in terms of questionnaire, cognitive test, and transcripts data.

Questionnaire Overlap. A crosswalk for NELS:88 intracohort and NLS-72, HS&B, NELS:88 intercohort comparisons is provided as an appendix (Appendix A) to this monograph. There are many topics that are covered in one study but not the others, or that are covered by questions that are substantially (or subtly) different. Nonetheless, a core of items is comparable across all three, and a larger number of items comparable across HS&B and NELS:88.[18]

Some items are repeated in identical form across the studies. Others appear to be essentially similar despite small differences in wording or response categories; analysts must exercise their own cautious judgments about such cases. For a number of items with like question wording, dissimilar response categories were employed. In many such cases, comparability can be achieved by recoding the response categories so that they are compatible.

The crosswalk identifies items that are plausibly similar across studies (or waves or components). Again, researchers must exercise their own cautious judgment before choosing comparison items. While most items listed in the crosswalk are transparently comparable (for example, the ten life values items in NLS-72 were repeated almost without change[19] in stem or response categories in HS&B in 1980 and NELS:88 in 1992), other items are more problematic for comparisons. It may be useful to illustrate this issue by providing a few examples of potentially problematic comparisons.

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[18] For detailed discussions of item comparability issues for the 1980 and 1990 sophomore data, see Rasinski, Ingels, Rock, and Pollack, 1993; and Ingels, Scott, Lindmark, Frankel, and Myers, 1992, Appendix D.

[19] The one change in this series is represented by NELS:88 variable F2S401 which reads "Getting away from this community" whereas NLS-72 base year item BQ201 reads "Getting away from this area of the country", as does the HS&B item.

Table 5: Questionnaire assignment in HS&B and NELS:88 second follow-up

HS&B (1982)	questionnaire	NELS:88 (1992)	questionnaire
enrolled in high school	student	enrolled in high school	student
graduated early	student (including early grad supplement)	graduated early or have already received GED	student (including early grad supplement)
not enrolled in HS, but enrolled in GED preparation classes or other special program or have received GED	dropout	not enrolled in HS, but enrolled in GED preparation classes or other special program, but have *not* received GED or equivalent	dropout
dropout (haven't attended school for 20 consecutive days or more	dropout	dropout (haven't attended school for 20 consecutive days or more)	dropout

The homework questions in NLS-72, HS&B, and NELS:88 provide one example of problematic comparability. NLS-72 asked "Approximately what is the average amount of time you spend on homework a week?" and provided response categories of "No homework is ever assigned, I have homework but don't do it, less than 5 hours a week, between 5 and 10 hours a week, more than 10 hours a week." In HS&B the question stem was retained, and while additional response categories were provided, they can be mapped into the broader categories of the NLS-72. In the NELS:88 first and second follow-ups, homework was inquired about using a two-column response format that distinguished in-school and out-of-school, and cut points were used for the response options that do not readily map into the NLS-72 and HS&B scheme. It is possible to devise various schemes for trying to compare the NELS:88 homework results with the earlier studies. Nevertheless, there is no objective criterion against which to evaluate the success of any such attempted mapping.

Future occupational expectations provide a second example of problematic comparability. There are items that ask about future occupational expectations in all three studies. Unlike the HS&B and NELS:88 items, the NLS-72 item is not keyed to a specific age and uses "like" instead of "plan or expect". Can the NLS-72 item be compared to NELS:88 nonetheless? Again, researchers must make their own judgments about comparability, and these judgments may depend in part on specific analytic objectives. For example, the NLS-72 questions would seem to license loftier or more wishful ambitions (the NLS-72 wording is "circle the one number that goes with the best description of the kind of work you would like to do"; the NELS:88 wording is "which of the categories below comes closest to describing the job or occupation that you expect or plan to have...when you are 30 years old"). In comparing NLS-72 and NELS:88 seniors, one finds that females have higher future occupational expectations in 1992 than in 1972. Since the wording of the NLS-72 item might be thought to minimize the large observed difference between women in the two cohorts, one might feel additional confidence that the trend toward higher female occupational expectations was real. Nonetheless, it remains possible to entertain at least some skepticism that these items are fully comparable, given that one instances aspirations and the other expectations, and that one is indefinite as to point in time and the other refers to age 30. Many more examples could be cited, but the larger point would remain the same--data users should assess carefully the comparison items listed in the crosswalk to ensure that they meet their analytic requirements.

Cognitive Test Comparability. IRT methods have been used to put mathematics, vocabulary, and reading scores on the same scale for 1972, 1980, and 1982 seniors.[20] Additionally, there are common items in the HS&B and NELS:88 mathematics tests that provide a basis for equating 1980-1990 and 1982-1992 mathematics results. In general, however, the tests used in the three studies differ in many ways. Though group differences by standard deviation units may profitably be examined, caution should be exercised in drawing time lag comparisons for cognitive test data.

One particular caveat that should be entered concerns the NELS:88 mathematics and reading tests. NELS:88 used multiple, adaptive forms of these two tests, so that a broader range of ability could be measured. Due to such differences in methodology and item pool characteristics, subgroup differences (for example) that are detected by the NELS:88 math and reading tests may have a somewhat different meaning than differences registered in the earlier tests, and interpretation should be qualified accordingly.

The HS&B sophomore cohort and NELS:88 provide a strong basis for explaining changes in high school achievement over time. Both studies measure how much was learned over the last two years of

[20] See Rock, Hilton, Pollack, Ekstrom and Goertz, 1985, for details.

high school, and provide a wealth of individual-level explanatory variables. However, in comparing HS&B and NELS:88 test results, differences between the two cohorts may not always be typical of longer term trends. Hence, one might consider using the NAEP trend line (the NAEP *trend sample* is based on multiple *age* cohorts, and provides data from as early as 1969) to locate the HS&B and NELS:88 cohorts. (For further information about NAEP trend data in mathematics, science and reading, see Mullis et al. 1991. Note also that for NELS:88 and NAEP 1992 mathematics achievement, NELS:88 provides a NAEP-equated score).

Transcript Comparability. The HS&B, NAEP (1987, 1990) and NELS:88 high school transcript studies were designed to support comparisons. Despite the large similarities between the four transcript studies, there are some differences in design and content that must be taken into account when planning comparative analyses. (For a detailed account, see the companion monograph in this series--Ingels and Taylor, 1994).

Certain generalizations may also be made about course enrollment trends based on data collected for 1969 public school graduates in the Study of Academic Growth and Prediction (Hilton, 1971; Tuma et al. 1989), and based on transcripts of 1975-82 high school graduates in the Department of Labor's NLSY (CHRR, 1993).

Weights, Flags, and Unweighted (Sample) *N*s for Sophomore and Senior Cohort Comparisons. Table 6 sketches the weights, flags, and sample *N*s associated with sophomore and senior intercohort comparisons.

Need for caution in comparing data across cohorts. Accurate trend measurement faces several challenges. Sampling error tends to be more of a problem for intercohort comparisons than for intracohort, since there is sampling error each time an independent sample is drawn. Differences in two sample means estimated from independent samples will be a function not only of the real differences in means, but also the sampling errors associated with both measurements. Hence small (but not therefore necessarily unimportant) differences may be harder to detect.

In estimating trends based on results from two or more sample surveys, a number of nonsampling errors also may arise. Differences in instrument format and wording, data collection mode or methodology, are potential sources of nonsampling error. While the requirements of change measurement dictate that the same measures be repeated in the same way, there are also strong disincentives to holding measures and methodologies constant. The goals, the subject, and the technology of education measurement do not remain static. The educational policy agenda changes over time; the manner and matter of education changes as curriculum content and instructional methods are revised; improvements arise--in survey methodologies, data capture technologies, and in measurement techniques--that promise large benefits if implemented. Finally, the instrument design process for NLS-72, HS&B and NELS:88, in which development of instruments has proceeded through broad consensus of the user community at different points in time, militates against a strongly conservative approach to content, format, and methodology, nor is there any correct or simple way to resolve all tensions between improved measurement and comparable measurement.

Hence, though the studies were designed to be as comparable as possible, caution must nonetheless be exercised in comparing NLS-72, HS&B and NELS:88 data. Student response rates differed and the characteristics of the nonrespondents may also differ across the studies. While nonresponse adjustments in the weights serve to compensate for nonresponse, no adjustment procedure can do so perfectly. Item response rates for questions that appear in both surveys differ as well, nor, in

Table 6: Sophomore and senior comparisons

SOPHOMORES

	1980 SOPHOMORES	1990 SOPHOMORES
	HS&B	NELS:88
Sample N	30,030*	17,544**
Weight	DESIGNWT	F1QWT
Flag	–	F1SEQFLG = 0

*HS&B base year participants on base year data files; postsecondary files reflect a base year subsample. Unweighted sample N for retained sophomores in postsecondary rounds who participated in 1980 = 14,102 (participation flag BYPART = 1, weight = BYWT.)

**This N represents sophomore cohort cases (participants) delivered in the first follow-up. In the second follow-up, 1990 sophomores who were ineligible in the base year but deemed eligible for the first follow-up were added, for a new total of 17,754 1990-participating sophomore cohort members.

SENIORS

	1972 SENIORS	1980 SENIORS	1992 SENIORS
	NLS-72	HS&B	NELS:88
Sample N	16,683	28,240*	16,114**
Weight	W1	DESIGNWT	F2QWT
Flag	–	–	F2SEQFLG = 0

*HS&B base year participants on base year data files; postsecondary files reflect a base year subsample. Unweighted sample N for retained seniors in postsecondary rounds who participated in 1980 = 11,500, (participation flag BYPART = 1, weight = BYWT.)

**This number excludes NELS:88 early graduates. Case N is for the public use file; there are 16,120 participants on the privileged use file.

general, have missing data been imputed. Differences in context and question order for trend items in the various student questionnaires; differences in test format, content, and context; and other factors such as differences in data collection methodology, may also influence the accuracy of intercohort comparisons.

More specifically, there were differences in mode and time of survey administration across the four cohorts. For example, NELS:88 seniors were generally surveyed earlier in the school year than were NLS-72 seniors (many NELS:88 seniors were surveyed in January and February of 1992, though survey work continued into May); NLS-72 baseline seniors were surveyed quite late in the school year.[21]

NLS-72 survey forms were administered by school personnel; HS&B and NELS:88 survey forms were administered primarily by contractor (NORC) staff. In NLS-72, seniors marked answers on an answer sheet (separate from the test booklet) while in 1980 and 1982 (HS&B) and NELS:88, answers were marked in the test booklet. The HS&B format of inclusion of answers as an integral part of the test booklet is thought to have given a modest advantage to HS&B test takers (see Rock, Hilton, Pollack, Ekstrom, & Goertz, 1985, for further details). Other differences between the NLS-72 and the HS&B/NELS:88 tests include improved mapping in the latter tests and the procedure of blackening an oval versus blackening a box (Hilton, 1992, cites a study by Earles, Guiliano, Ree & Valentine, that indicates such format differences are significant for speeded tests, accounting for about one half a standard deviation in difference of result).[22]

There are differences in questionnaire construction across the three studies. NLS-72 and NELS:88 senior questionnaires used skip patterns more extensively than did the HS&B senior instrument; the NELS:88 and HS&B questionnaires were longer than the NLS-72 questionnaire.

NLS-72 and HS&B senior cohort sample members were subjected to their first measurement as seniors; HS&B sophomores were administered their second measurement as seniors, and NELS:88 eighth graders their third. We do not believe that problems associated with repeated measurements (such as remembering past responses to individual items) are likely to be a difficulty, both because of the sheer number of test and questionnaire items asked, and the two year intervals between data collections. However, participation in a longitudinal study in theory may influence the survey member's subsequent behavior or attitudes. Since most NELS:88 1992 sample members had also been surveyed as eighth and

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[21] Indeed, while in the spring 1972 baseline 16,683 seniors in 1,061 schools completed an NLS-72 student questionnaire, 257 schools that could not (because, for example, their school year ended earlier in the spring) take part in the base year were added, in accordance with the original design--these seniors had now left their schools but they were asked some retrospective (senior year) questions. Such individuals--who redress the school frame undercoverage bias in the NLS-72 base year--do not appear on the NLS-72 base year files that would typically be employed for comparisons of high school seniors, although the presence of some retrospective data for these individuals permits refinement of comparisons grounded in 1972 data.

[22] The implications of context and format differences for trend comparisons have been well described in the NAEP literature--see especially A.E. Beaton and R. Zwick, 1990, *The Effect of Changes in the National Assessment: Disentangling the NAEP 1985-86 Reading Anomaly* (Princeton, N.J.: ETS, NAEP Report 17-TR-21), which discusses the effects of changes in item context, assessment booklets and procedures. For some NAEP reading tests the impact of such changes was apparently larger than the trend effects that were being measured.

tenth graders, such "panel effects"[23] are in principle possible with this group (as with HS&B sophomores two years later, in 1982). In contrast, 1972 and 1980 seniors (and 1980 sophomores) were new to NLS-72 or HS&B.

Any of these differences may, to some unknown extent, affect the comparability of the NELS data sets, and make the task of accurate trend measurement more difficult to accomplish.

[23] Discussions of longitudinal conditioning or panel effects (also known as "time in sample bias" or "panel conditioning")--for example, whether strong effects potentially exist or could affect data quality--may be found in Kasprzyk, D., Duncan, G., Kalton, G., & Singh, M.P., eds. *Panel Surveys*, 1989 (New York: Wiley). See especially contributions by B. Bailar; D. Cantor; D. Holt; A. Silberstein and C. Jacobs; L. Corder and D. Horvitz; and J. Waterton and D. Lievesley.

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Appendix A

NELS:88 Second Follow-Up Item Overlap

with

HS&B and NLS-72

Note: This questionnaire content crosswalk identifies items that are similar across the student questionnaires of the senior year studies of NLS-72, HS&B, and NELS:88. The wording of these items is not always identical, nor are the response options always exactly the same. Researchers interested in making comparisons across cohorts should check all selected items for nuances that could convey differences in meaning. In addition to examining wording changes in the items, analysts should be attentive to any differences in item format or context as well. (A crosswalk between the HS&B base year parent questionnaire and the NELS:88 parent questionnaires appears as Appendix D of the *Second Follow-Up Parent Component Data File User's Manual*.)

Intercohort Student Questionnaire Crosswalks
1992 = NELS:88 Second Follow-up
1982 = HS&B 1982 Seniors
1980 = HS&B 1980 Seniors
1972 = NLS-72 Seniors

QUESTION NUMBER				QUESTION WORDING
Seniors In:				
1992	1982	1980	1972	
5a	–	–	–	Date questionnaire completed
5b	–	9LF	–	Social security number
6a	–	–	–	Current grade level
6b	–	–	–	Certification from current school program
7a	67i	53h	–	In school there is real school spirit
7b	–	–	–	In school there are interracial friends
7c	67c	53c	18f	In school the teaching is good
7d	67e	53e	18j	In school teachers are interested in students
7e	66g	59f	–	In school I don't feel safe
7f	–	–	–	In school disruptions impede learning
7g	–	–	–	In school interracial fights occur
7h	–	–	–	In school there are many gangs
7i	–	–	–	In school students are graded fairly
7j	–	–	–	In school there is a lot of cheating
7k	–	–	–	In school some teachers ignore cheating
7l	67h	53g	–	In school discipline is fair
8a	–	–	–	Times at school I had something stolen from me
8b	–	–	–	Times at school someone offered me drugs
8c	–	–	–	Times going to school someone offered drugs
8d	–	–	–	Times at school someone threatened to hurt me
8e	–	–	–	Times going to school someone threatened harm
8f	–	–	–	Times at school I got into a physical fight
8g	–	–	–	Times going to school I physically fought
9a	–	–	–	Times I was late for school
9b	66f	59e	–	Times I cut or skipped classes
9c	–	–	–	Times I missed a day of school
9d	66b	–	–	Times I got in trouble for breaking rules
9e	66d	–	–	Times I was put on an in-school suspension
9f	66e	59d	–	Times I was suspended or put on probation
9g	–	–	–	Times I was transferred for disciplinary reason
9h	–	61a	–	Times I was arrested
9i	–	–	–	Times I spent time in a juvenile center
10	–	–	–	Reason for last absence from school
11a	–	–	–	Last unexcused absence from high school
11b	16	16	–	# of days missed during last unexcused absence
12A	2	2	2	High School program description

QUESTION NUMBER				QUESTION WORDING
1992	1982	1980	1972	
12Ba	3a	–	3k	Was assigned to this program
12B	3b	–	3d	Chose program after talking to teacher
12Bc	3c	–	3a	Chose program after talking to my parents
12Bd	3d	–	3h	Chose program after talking to my friends
12Be	3e	–	3i	Chose program myself
12Bf	3f	–	3j	Only program offered at school
13a	9a	11a	–	Ever been in remedial English
13b	9b	11b	–	Ever been in remedial mathematics
13c	9e	11e	–	Ever been in bilingual/bicultural programs
13d	–	–	–	Ever been in English as a Second Lang. program
13e	–	11cd	–	Ever been in advanced placement program
13f	9h	11h	–	Ever been in educationally handicapped program
13g	9i	11i	–	Ever been in physically handicapped program
13h	–	–	–	Ever been in dropout prevention program
13i	–	–	–	Ever been enrolled in vocational course
13j	–	–	–	Ever been in a gifted/talented program
13k	–	–	–	Ever been in a magnet program
14a	11cd	14cd	6de3	Participation in Talent Search or Upward Bound
14b	–	14cd	6de3	Years participated in TS, UB or similar
15a	4h	4g	–	Enrollment in a science class past 2 years
15Ba	–	–	–	Current science class: review work from previous day
15Bb	–	–	–	Current science class: listen to teacher lecture
15Bc	–	–	–	Current science class: copy teacher's notes
15Bd	–	–	–	Current science class: use calculators
15Be	–	–	–	Current science class: watch teacher do experiment
15Bf	–	–	–	Current science class: do experiment alone or in group
15Bg	–	–	–	Current science class: use book to do an experiment
15Bh	–	–	–	Current science class: write up reports on experiments
15Bi	–	–	–	Current science class: use computers to analyze data
15Bj	–	–	–	Current science class: make own choice of topic for study
15Bk	–	–	–	Current science class: design and conduct projects alone
15Bl	–	–	–	Current science class: discuss career opportunities in science
16	–	–	–	Science class emphasis on what objectives
17	–	–	–	Current science class participation
18a	–	–	–	Current science class enrollment
18b	–	–	–	Importance of guidance in taking science
18c	–	–	–	Reasons for taking a science class
18d	–	–	–	Reasons for not taking a science class
19a	4a	4a	–	Enrollment in a math class past 2 years
19Ba	–	–	–	Current math class: review work from previous day
19Bb	–	–	–	Current math class: listen to teacher lecture
19Bc	–	–	–	Current math class: copy teacher's notes
19Bd	–	–	–	Current math class: use books other than text
19Be	–	–	–	Current math class: do problem-solving activities

QUESTION NUMBER				QUESTION WORDING
1992	1982	1980	1972	
19Bf	–	–	–	Current math class: use calculators
19Bg	–	–	–	Current math class: use computers
19Bh	–	–	–	Current math class: explain work orally
19Bi	–	–	–	Current math class: participate in student discussions
19Bj	–	–	–	Current math class: use hands-on materials
19Bk	–	–	–	Current math class: discuss career opportunities
19Bl	–	–	–	Current math class: write about math
20a	–	–	–	Math class: emphasis on increasing math interest
20b	–	–	–	Math class: emphasis on memorization of rules
20c	–	–	–	Math class: emphasis on preparation for more math
20d	–	–	–	Math class: emphasis on meaning/solving problems
20e	–	–	–	Math class: emphasis on math in daily life
21	–	–	–	Current math class participation
22a	–	–	–	Math class this term
22b	–	–	–	Importance of guidance in taking a math class
22c	–	8A	–	Reasons for taking a math class
22d	–	–	–	Reasons for not taking a math class
23a	4l	4k	–	Enrollment in a vocational class past 2 years
23Ba	–	–	–	Vocational class: emphasis on increased interest
23Bb	–	–	–	Vocational class: emphasis on teaching immediate skills
23Bcb	–	–	–	Vocational class: emphasis on facts, rules and steps
23Bd	–	–	–	Vocational class: emphasis on math and science in work
23Bed	–	–	–	Vocational class: emphasis on a problem and its meaning
23Bf	–	–	–	Vocational class: emphasis on use of physical equipment
23Bg	–	–	–	Vocational class: emphasis on further studies
24a	18a	–	–	How often come to class without pencil or paper
24b	18b	–	–	How often come to class without books
24c	18c	–	–	How often come to class without homework done
25a1	–	–	–	Time spent on math homework in school
25a2	–	–	–	Time spent on math homework out of school
25b1	–	–	–	Time spent on science homework in school
25b2	–	–	–	Time spent on science homework out of school
25c1	–	–	–	Time spent on English homework in school
25c2	–	–	–	Time spent on English homework out of school
25d1	–	–	–	Time spent on history/social studies homework in school
25d2	–	–	–	Time spent on history/social studies homework out of school
25e1	–	–	–	Time spent on other homework in school
25e2	–	–	–	Time spent on other homework out of school
25f1	15	15	7	Total time spent on homework in school
25f2	15	15	7	Total time spent on homework out of school
26	–	–	–	People who assist with homework
27	70	55	–	Minimum competency test for graduation taken
28	71	56	–	Results of competency test
29a	–	–	–	Recognition: elected officer of a school class

QUESTION NUMBER				QUESTION WORDING
1992	1982	1980	1972	
29b	–	–	–	Recognition: won academic honor
29c	–	–	–	Recognition: rec'd award in science or math fair
29d	–	–	–	Recognition: good attendance
29e	–	–	–	Recognition: good grades or honor roll
29f	–	–	–	Recognition: wrote essay or poem
29g	–	–	–	Recognition: M.V.P. of sports team
29h	–	–	–	Recognition: community service award
29i	–	–	–	Recognition: vocational/technical competition participant
30Aa	38a	32a	10a	Played on team interscholastic sport
30Ab	–	–	–	Played an individual sport
30Ac	38c	32c	10b	Participated in cheerleading/pompom
30Ba	38e,f	32e,f	10c	Participated in school musical group
30Bb	38d	32d	10c	Participated in school drama club or play
30Bc	38k	32k	10h	Participated in student government
30Bd	38h	32h	10e	Participated in school honor society
30Be	38i	32i	10f	Participated in school yearbook/newspaper
30Bf	38p	–	–	Participated in school service clubs
30Bg	38j	32j	10g	Participated in school academic clubs
30Bh	38g	32g	10d	Participated in school hobby clubs
30Bi	38l	32l	10i	Participated in FTA, FHA, FFA clubs
30Bj	38b	32b	10a	Participated in intramural team sports
30Bk	–	32b	10a	Participated in intramural individual sports
31	–	–	–	Time spent on school-sponsored activities
32	60b	47b	–	Time spent on personal reading outside school
33a	–	–	–	Time spent using personal computers
33b	–	–	–	Time spent working on hobbies
33c	–	–	–	Time spent participating in religious activity
33d	–	–	–	Time spent in youth groups
33e	–	–	–	Time spent doing community service
33f	60d	47d	–	Time spent driving or riding around
33g	–	47a,e	–	Time spent doing things with friends
33h	60f	47g	–	Time spent doing things with parents
33i	–	–	–	Time spent doing things with other adults
33j	–	–	–	Time spent taking classes outside school
33k	–	–	–	Time spent taking sports lessons
33l	–	–	–	Time spent playing sports outside school
34	–	–	–	Time spent per day playing video/computer games
35	61	48	–	Time spent per day watching TV/videotapes
36	85	70	–	National youth service program preference
37	–	–	–	Community volunteer work in past two years
38	–	–	–	Types of unpaid volunteer work
39	–	–	–	Organizations involved with for volunteer work
40a	73a	57a	20a	Importance of being successful in line of work
40b	73b	57b	20b	Importance of finding the right person to marry

QUESTION NUMBER				QUESTION WORDING
1992	1982	1980	1972	
40c	73c	57c	20c	Importance of having lots of money
40d	73d	57d	20d	Importance of having strong friendships
40e	73e	57e	20e	Importance of finding steady work
40f	73f	57f	20f	Importance of helping other community members
40g	73g	57g	20g	Importance of my children having better futures
40h	73h	57h	20h	Importance of living close to parents
40i	73i	57i	20i	Importance of leaving the community
40j	73j	57j	20j	Importance of correcting social inequalities
40k	73k	57k	–	Importance of having children
40l	73l	57l	–	Importance of having leisure time
40m	–	–	–	Importance of getting away from parents
40n	–	–	–	Importance of being an expert in my field
40o	–	–	–	Importance of getting a good education
41a	63a	50a	–	What father thinks I should do post high school
41b	63b	50b	–	What mother thinks I should do post high school
41c	63e	50e	–	What friends think I should do post high school
41d	63e	50e	–	What relative thinks I should do post HS
41e	63c	50c	–	What counselor thinks I should do post HS
41f	63d	50d	–	What teacher thinks I should do post HS
41g	–	–	–	What coach thinks I should do post high school
42a	81	–	91a	How far in school does dad want me to go
42b	81	66	91b	How far in school does mom want me to go
43	80	65	29	How far in school I think I will get
44a	–	–	–	Have you taken/plan to take Pre-SAT test
44b	8a	9a	–	Have you taken/plan to take the SAT
44c	8b	9b	–	Have you taken/plan to take the ACT
44d	–	–	–	Have you taken/plan to take an AP test
44e	8c	9c	–	Have you taken/plan to take the ASVAB
44f	–	–	–	Have you taken/plan to take other tests
45	–	–	–	SAT/ACT preparation plans
46	–	–	–	How will you spend the summer
47	–	–	–	Do you have skills for desired job in 5 years
48a	87c	33	30	Plans to join the Armed Forces
48b	–	34	44	Armed Forces branch
48c	–	–	46	Reason for joining the Armed Forces
49	87h	–	–	Plan on going to school right after high school
50	–	–	37,42,49	Reasons not to continue education immediately
51	87a	72a	32	Plan to work full-time after HS graduation
52	88	73	33	Do you have a full-time job arranged
53	–	–	–	People at school who helped select job
54	30	–	–	School job finding services used
55	91	–	–	Hourly wage expected at FT job, post HS grad
56	122	115	–	Plans to continue education after high school
57	–	–	–	Help received at school w/college applications

QUESTION NUMBER				QUESTION WORDING
1992	1982	1980	1972	
58	–	–	–	What have you done to learn about financial aid
59a	123a	116a	68a	Importance of low expenses on school choice
59b	123b	116b	68b	Importance of financial aid on school choice
59c	123c	116c	68c	Importance of curriculum on school choice
59d	123e	116e	68e	Importance of athletics on school choice
59e	123f	116f	–	Importance of social life on school choice
59f	123g	116g	68k	Importance of living at home on school choice
59g	123h	–	–	Importance of not living at home on choice
59h	123i	–	–	Importance of religion on school choice
59i	123j	–	–	Importance of low-crime on school choice
59j	123k	–	–	Importance of job placement on school choice
59k	–	–	–	Importance of graduate school placement on choice
59l	123d	116d	68d	Importance of academic reputation on choice
59m	–	–	68g	Importance of easy admission on school choice
59n	–	–	–	Importance of degree for job on choice
59o	–	–	–	Importance of school's race/ethnicity on choice
59p	–	–	–	Importance of the school size on school choice
59q	–	–	–	Importance of location on school choice
59r	–	–	68h	Importance of attending parent school on choice
60a	124	117	66	To how many school have you applied
60B1	126	119	–	Name and location of first school applied to
60B1	125	118	67	Accepted at school 1
60B1	–	–	–	Applied for financial aid at school 1
60B1	–	–	–	Awarded financial aid at school 1
60B2	–	–	–	Name and location of second school applied to
60B2	–	–	–	Accepted at school 2
60B2	–	–	–	Applied for financial aid at school 2
60B2	–	–	–	Awarded financial aid at school 2
61	115	107	70	Type of school most likely to attend
62	127	120	69	Field you would most like to study in school
63	120	113	–	Field in which you are most likely to train
64a	–	–	–	Expected job/occupation after high school
64b	77a	62	25	Expected job/occupation at age 30
65	–	–	–	Expected education needed for job at 30
66a	75a	58a	21a	I feel good about myself
66b	–	–	–	I don't have enough control of my life
66c	75b	58b	21b	Good luck is more important than hard work
66d	75c	58c	21c	I feel I am a person of worth
66e	75d	58d	21d	Am able to do things as well as most others
66f	75e	58e	21e	When I try to get ahead, I am stopped
66g	75f	58f	21f	My plans hardly ever work out
66h	75h	58h	21h	On the whole, I am satisfied with myself
66i	–	–	–	I feel useless at times
66j	75j	58j	–	At times, I think I am no good at all

QUESTION NUMBER				QUESTION WORDING
1992	1982	1980	1972	
66k	75k	58k	–	I am certain I can make my plans work
66l	75l	58l	–	I feel I do not have much to be proud of
66m	–	–	–	Chance and luck are very important in my life
67a	–	–	–	Chances you will graduate from high school
67b	–	–	–	Chances you will go to college
67c	–	–	–	Chances you will have a job that pays well
67d	–	–	–	Chances you will own your own home
67e	–	–	–	Chances you will have a job you enjoy
67f	–	–	–	Chances you will have a happy life
67g	–	–	–	Chances you will stay in good health
67h	–	–	–	Chances you will be able to live where you want
67i	–	–	–	Chances you will be respected in your community
67j	–	–	–	Chances you will have friends you can count on
67k	–	–	–	Chances your life will be better than parents
67l	–	–	–	Chances your children's life better than yours
68a	64c	–	–	Important to friends to attend class regularly
68b	–	–	–	Important to friends to study
68c	–	–	–	Important to friends to play sports
68d	64a	–	–	Important to friends to get good grades
68e	64e	–	–	Important to friends to be popular
68f	–	–	–	Important to friends to finish High School
68g	–	–	–	Important to friends to go steady
68h	64d	–	–	Important to friends to continue education
68i	–	–	–	Important to friends to participate in religion
68j	–	–	–	Important to friends to do community work
68k	–	–	–	Important to friends to have a regular job
68l	–	–	–	Important to get together with friends
68m	–	–	–	Important to friends to go to parties
68n	–	–	–	Important to friends to have sexual relations
68o	–	–	–	Important to friends to use drugs
68p	–	–	–	Important to friends to drink alcohol
68q	–	–	–	Important to friends to make money
69a	–	–	–	# of friends that dropped out of HS
69b	–	–	–	# of friends that have no plans for college
69c	–	–	–	# of friends that plan to work full-time
69d	–	–	–	# of friends to attend community/tech school
69e	–	–	–	# of friends that plan to attend college
70	–	–	–	# of friends that belong to gangs
71	–	–	–	Do you belong to a gang
72a	97a	81a	–	Age you expect to marry
72b	97b	81b	–	Age you expect to have first child
72c	97c	81c	–	Age you expect to start first FT job
72d	97d	81d	–	Age you expect to live in own home or apt.
72e	97e	81e	–	Age you expect to finish your education

QUESTION NUMBER				QUESTION WORDING
1992	1982	1980	1972	
73	–	–	–	Current marital status
74	–	–	–	Importance of marriage before sexual relations
75	–	–	–	Consider having a child if not married
76	–	–	–	Have any children of your own
77	–	–	–	First child's birthdate
78	–	–	–	Frequency of care given to child by individuals
79	–	–	–	Type of relationship w/ mom or dad of 1st child
80	–	–	–	Number of cigarettes smoked daily
81a	–	–	–	Occasions drank alcoholic beverages in lifetime
81b	–	–	–	Occasions drank alcohol last 12 months
81c	–	–	–	Occasions drank alcohol last 30 days
82	–	–	–	Times had 5 drinks or more in a row last 2 wks
83a	–	–	–	Occasions used marijuana or hashish in lifetime
83b	–	–	–	Occasions used marijuana or hashish last year
83c	–	–	–	Occasions used marijuana or hashish last month
84a	–	–	–	Occasions used cocaine in any form in lifetime
84b	–	–	–	Occasions used cocaine in any form last year
84c	–	–	–	Occasions used cocaine in any form last month
85	–	–	–	Occasions on drugs at school
86a	24	–	–	Have you ever worked for pay
86b	–	21	–	Date of the last time you worked for pay
87	–	–	–	Date started current or most recent job
88	25	22	8	Hours worked per week at most recent job
89	–	–	–	Hours worked on the weekends
90	29	24	–	Type of work at current or most recent job
91	26	23	–	Pay rate per hour at current or most recent job
92a	27b	–	–	Money spent on clothes and other things
92b	–	–	–	Money spent to go out
92c	27c	–	–	Money spent to buy gas and other car items
92d	–	–	–	Money spent to pay for rent
92e	–	–	–	Money spent to purchase food
92f	27d	–	–	Money spent for future education
92g	–	–	–	Money spent to buy alcohol
92h	–	–	–	Money spent to buy illegal drugs
93	–	–	–	Do you babysit for own child or others
94	–	–	–	Hours per school day you babysit
95	–	–	–	School days missed to babysit
96a	–	–	–	Past two years, family moved to a new home
96b	–	–	–	Past two years, parents got divorced
96c	–	–	–	Past two years, parent(s) got re/married
96d	–	–	–	Past two years, parent(s) lost job
96e	–	–	–	Past two years, parent(s) started work
96f	–	–	–	Past two years, parent(s) got a better job
96g	–	–	–	Past two years, student became seriously ill

QUESTION NUMBER				QUESTION WORDING
1992	1982	1980	1972	
96h	–	–	–	Past two years, my parent(s) died
96i	–	–	–	Past two years, close relative died
96j	–	–	–	Past two years, unmarried sister got pregnant
96k	–	–	–	Past two years, brother or sister dropped out
96l	–	–	–	Past two years, family on welfare
96m	–	–	–	Past two years, family off welfare
96n	–	–	–	Past two years, family member seriously ill
96o	–	–	–	Past two years, family member did drugs
96p	–	–	–	Past two years, family member did drug rehab
96q	–	–	–	Past two years, family member a crime victim
97	–	–	–	Parents know best friend's parents
98a	–	–	–	Decision maker about staying out late
98b	–	–	–	Decision maker about car use
98c	–	–	–	Decision maker about having a job
98d	–	–	–	Decision maker about spending money
98e	–	–	–	Decision maker about drinking alcohol w/parents
98f	–	–	–	Decision maker about drinking alcohol at party
98g	–	–	–	Decision maker about revocation of privileges
98h	–	–	–	Decision maker about going to college
98i	–	–	–	Decision maker about which classes to take
99a	–	–	–	Discussed school courses with parents
99b	–	–	–	Discussed events of interest with parents
99c	–	–	–	Discussed class topics with parents
99d	–	–	–	Discussed grades with parents
99e	–	–	–	Discussed entrance exams with parents
99f	–	–	–	Discussed applying to college with parents
99g	–	–	–	Discussed post high school jobs with parents
99h	–	–	–	Discussed current events with parents
99i	–	–	–	Discussed things that trouble you with parents
100a	–	–	–	Parents trust you to do what they expect
100b	–	–	–	I often do not know why to do what I am told
100c	–	–	–	I count on parents to solve problems for me
100d	–	–	–	I will be a source of pride in the future
100e	–	–	–	My parents get along well with one another
100f	–	–	–	My own family will be similar to my current one
101	–	–	–	Past two years, did you run away from home
102	–	–	–	Number of times family moved since 01-01-88
103	–	–	–	Number of school changes since 01-01-88
104	–	–	–	Age when left alone at home for a week plus
105	–	93	–	Do you think of yourself as a religious person
106	–	92	–	Frequency of attendance at religious services
107	12	11LF	88	Is English your native language
108	–	18LF	–	Use of native language
109a	–	19ALF	–	Understanding of spoken English

QUESTION NUMBER				QUESTION WORDING
1992	1982	1980	1972	
109b	–	19BLF	–	Proficiency in speaking English
109c	–	19CLF	–	Proficiency in reading English
109d	–	19DLF	–	Proficiency in writing English
110a	–	–	–	Special help given in increasing English skills
110B	–	–	–	Special help given in form of individual tutor
110B	–	–	–	Special help given in form of a small group
110B	–	–	–	Special help given in form of a large group
110B	–	–	–	Special help given in form of ESL
110B	–	–	–	Special help given in form of bilingual education
110C	–	–	–	Understanding of spoken English has improved
110Cb	–	–	–	Ability to speak English has improved
110Cc	–	–	–	Ability to read English has improved
110Cd	–	–	–	Ability to write English has improved
111a	–	–	–	Problems writing papers based on English skills
111b	–	–	–	Problems with essay exams based on English
111c	–	–	–	Problems with choice exams based on English
111d	–	–	–	Problems understanding teacher based on English
111e	–	–	–	Problems taking notes based on English skills
111f	–	–	–	Problems participating in class based on Eng.
111g	–	–	–	Problems doing homework based on English
112a	–	–	–	Problems applying for jobs based on English
112b	–	–	–	Problems with teachers based on English skills
112c	–	–	–	Problems participating at school based on English
112d	–	–	–	Problems with sports based on English skills
112e	–	–	–	Problems making friends because of English
113a	–	–	–	Problem getting good grades based on English
113b	–	–	–	Problem getting a job based on English skills
113c	–	–	–	Problem getting higher pay based on English
113d	–	–	–	Problem applying to college based on English
113e	–	–	–	Problem applying to jr. college based on Eng.
113f	–	–	–	Problem applying to trade school based on Eng.
113g	–	–	–	Problem of acceptance to college based on Eng.
113h	–	–	–	Problem of acceptance to jr. coll. from Eng.
113i	–	–	–	Problem of acceptance at trade school for Eng.
113j	–	–	–	Problem of good grades at coll. based on Eng.
113k	–	–	–	Problem of good grades at trade schl. from Eng.
114	G1	–	–	Date of high school graduation
115a	G2	–	–	Graduated early to apply to college early
115b	G2	–	–	Graduated early to start a job or join military
115c	G2	–	–	Graduated early because of boredom at HS
115d	G2	–	–	Graduated early to move to another city
115e	G2	–	–	Graduated early to start a family
115f	G2	–	–	Graduated early for other reasons
116a	G4a	–	–	School counselor help decide to graduate early

QUESTION NUMBER				QUESTION WORDING
1992	1982	1980	1972	
116b	G4b	–	–	Teacher help decide to graduate early
116c	G4c	–	–	Parents help decide to graduate early
116d	G4d	–	–	Relative help decide to graduate early
116e	G4e	–	–	Other help decide to graduate early
117Aa	G5	–	–	Went to summer school to graduate early
117Ab	G5	–	–	Took extra courses to graduate early
117Ac	G5	–	–	Got AP/tested out of courses to graduate early
117Ad	G6	–	–	Got accepted to college to graduate early
117Ae	G5	–	–	Passed a test to graduate early
117B	–	–	–	What did you do to finish high school
118a	G7a	–	–	Working for pay as of 02-01
118b	G7b	–	–	Taking courses at 2 or 4 year school as of 02-01
118c	G7c	–	–	Taking courses at trade school as of 02-01
118d	G7d	–	–	In a training program as of 02-01
118e	G7e	–	–	On active duty in military as of 02-01
118f	G7f	–	–	A homemaker as of 02-01
118g	G7g	–	–	On temporary layoff from job as of 02-01
188h	G7h	–	–	Looking for work as of 02-01
118i	G7i	–	–	Taking a break from work as of 02-01
119	G8	–	–	Between high school and now, held FT job
120	G9	–	–	Months and years when you worked at all
121a	–	–	–	Description of current or most recent job
121b	G10.1	–	–	What kind of job or occupation do you have
121c	G10.2	–	–	What kind of business or industry is this in
121d	G10.3	–	–	What are your main activities or duties
122	G10.5	–	–	Date began at most recent or current job
123	G10.6	–	–	Date left most recent job
124	G11	–	–	Post high school class enrollment
125	G12	–	–	Dates of any post high school class enrollment
126	G13A1	–	–	Name of most recent or current school
126a	–	–	–	Applied for financial aid at current school
126b	–	–	–	Awarded financial aid at current school
127a	–	–	–	Attendance at any other school
127b	G13A2	–	–	Name and location of other school attended
127B	–	–	–	Applied for financial aid at other school
127B	–	–	–	Awarded financial aid at other school

Appendix B

NELS:88 First Follow-Up (1990) Item Overlap

with

the HS&B Base Year (1980) Sophomore Questionnaire

Note: This questionnaire content crosswalk identifies items that are similar across the sophomore year studies of HS&B and NELS:88. The wording of these items is not always identical, nor are the response options always exactly the same. Researchers interested in making comparisons across cohorts should check all selected items for nuances that could convey differences in meaning. In addition to examining wording changes in the items, analysts should be attentive to any differences in item format or context as well. Questions that are not identical across survey instruments, but may be made comparable by collapsing response categories, are marked by an asterisk.

1980-1990 SOPHOMORES: NELS:88 SOPHOMORE QUESTIONNAIRE, HIGH SCHOOL AND BEYOND SOPHOMORE QUESTIONNAIRE CROSSWALK

Question Number		Question Wording
NELS F1S #	**HS&B #**	
7a	--	In school students get along well with teachers
7b	--	In school there is real school spirit
7c	--	In school the rules for behavior are strict
7d	--	In school discipline is fair
7e	--	In school there are interracial friendships
7f	--	In school other students often disrupt class
7g	--	In school the teaching is good
7h	--	In school teachers are interested in students
7i	--	In school when I work hard teachers praise me
7j	--	In school I often feel put down by teachers
7k	--	In school I often feel put down by students
7l	--	In school most of my teachers listen to me
7m	66f*	In school I don't feel safe
7n	--	In school disruptions get in the way of my learning
7o	--	In school misbehaving students often get away with it
9a	--	Times at school I had something stolen from me
9b	--	Times at school someone offered to sell me drugs
9c	--	Times at school someone threatened to hurt me
9d	--	Times at school I got into a physical fight
10a	--	Times I was late for school
10b	--	Times I cut or skipped classes
10c	--	Times I got into trouble for not following school rules
10d	--	Times I was put on in-school suspension
10e	--	Times I was suspended or put on probation from school
10f	--	Times I was transferred for disciplinary reasons
10g	--	Times I was arrested
11a	--	Feel it is OK to work hard for good grades
11b	--	Feel it is OK to ask challenging questions
11c	--	Feel it is OK to solve problems using new ideas
11d	--	Feel it is OK to help others with their homework
12a	--	Feel it is OK to be late for school
12b	--	Feel it is OK to cut a couple of classes
12c	--	Feel it is OK to skip school for a whole day
12d	--	Feel it is OK to cheat on tests
12e	--	Feel it is OK to copy someone else's homework
12f	--	Feel it is OK to get into physical fights
12g	--	Feel it is OK to belong to gangs
12h	--	Feel it is OK to make racist remarks

Question Number		Question Wording
NELS F1S #	HS&B #	
12i	--	Feel it is OK to make sexist remarks
12j	--	Feel it is OK to steal from school, a student, or a teacher
12k	--	Feel it is OK to destroy or damage school property
12l	--	Feel it is OK to smoke on school grounds
12m	--	Feel it is OK to drink alcohol during the school day
12n	--	Feel it is OK to use illegal drugs during the school day
12o	--	Feel it is OK to bring weapons to school
12p	--	Feel it is OK to abuse teachers physically
12q	--	Feel it is OK to talk back to teachers
12r	--	Feel it is OK to disobey school rules
13	--	Days absent last semester
14	--	Main reason for my last absence
15a	--	On my last absence the school did not do anything
15b	--	On my last absence someone from school called my home
15c	--	On my last absence someone from school visited my home
15d	--	On my last absence the school sent a letter to my home
15e	--	On my last absence the school made me see a counselor
16a	--	When I returned my teachers helped me catch up
16b	--	When I returned other students helped me catch up
16c	--	When I returned someone else helped me
16d	--	When I returned I didn't need to catch up
16e	--	When I returned a teacher was mad at me or put me down
16f	--	When I returned an adult in the school asked where I'd been
16g	--	When I returned I fell behind
18A	3*	How sure I am that I will graduate from high school
18B	--	How sure I am that I will go on for further education after HS
20	1	High school program
26a	--	How often challenged to use mind in math
26b	--	How often challenged to use mind in English
26c	--	How often challenged to use mind in history
26d	--	How often challenged to use mind in science
34a	13a	Ever been in remedial English
34b	13b	Ever been in remedial mathematics
34c	13e	Ever been in a bilingual or bicultural program
34f	13h	Ever been in a program for the emotionally handicapped
34g	13i	Ever been in a program for the physically handicapped
36b	--	Time spent each week on math homework
36c	--	Time spent each week on science homework
36d	--	Time spent each week on English homework
36e	--	Time spent each week on social studies homework
36f	--	Time spent on homework each week for all other subjects

* Question is not identical across survey instruments, but may be made comparable by collapsing response categories.

Question Number		Question Wording
NELS F1S #	HS&B #	
39	--	Grades in specific subject areas
40a	16a	How often come to class without pencil or paper
40b	16b	How often come to class without books
40c	16c	How often come to class without homework done
41Aa-g	34a*	Participation in sports
41Ah	34b*	Participation in cheerleading
41Ba	34d,e*	Participation in band, orchestra, chorus, or other music group
41Bc	--	Participation in student government
41Bd	--	Participation in academic honor society
41Be	--	Participation in school yearbook or newspaper
41Bg	34g*	Participation in academic clubs
41Bh	34f*	Participation in hobby clubs
41Bi	34h*	Participation in vocational education or professional clubs
43	--	Additional reading each week
44a	47a	How often visit with friends at a local hangout
44b	--	How often use personal computers
44c	--	How often work on hobbies, arts, or crafts
44d	47b	How often read for pleasure
44e	--	How often go to park, gym, beach, or pool
44f	--	How often play ball or other sports with friends
44g	--	How often attend youth groups or recreational programs
44h	--	How often volunteer or perform community service
44i	47d	How often drive or ride around
44j	47e	How often talk with friends on the telephone
44k	--	How often talk or do things with mother or father
44l	--	How often talk or do things with other adults
44m	--	How often take classes: music, art, language, dance
44n	--	How often take sports lessons: Karate, tennis, etc.
44o	--	How often attend religious activities
45A	48	Hours watch TV on weekdays
45B	--	Hours watch TV on weekends
46a	61a	Important in my life to be successful in my line of work
46b	61b	Important in my life to find the right person to marry
46c	61c	Important in my life to have lots of money
46d	61d	Important in my life to have strong friendships
46e	61e	Important in my life to be able to find steady work
46f	--	Important in my life to help others in my community
46g	61g	Important in my life to give my children better opportunities
46h	61h	Important in my life to live close to my parents
46i	61i	Important in my life to get away from this area
46j	61j	Important in my life to work to correct inequalities
46k	61k	Important in my life to have children
46l	61l	Important in my life to have leisure time to enjoy interests
46m	--	Important in my life to get away from my parents

Question Number		Question Wording
NELS F1S #	**HS&B #**	
47a	50a	What father thinks I should do after high school
47b	50b	What mother thinks I should do after high school
47e	50c	What counselor thinks I should do after high school
47f	50d	What teacher thinks I should do after high school
48A	--	How far in school father wants me to go
48B	70	How far in school mother wants me to go
49	69	How far in school I think I will get
51	112	Plan to go to college when graduate; how soon
53	68	Job category expect or plan to be in at age 30
54	--	Any language other than English spoken at home
55[1]	11,15[2]	What other language is spoken in home
55A	--	Whether it is my native language
55Ba	--	How well understand native language
55Bb	--	How well speak native language
55Bc	--	How well read native language
55Bd	--	How well write native language
57a	19a[2]	How well understand English
57b	19b	How well speak English
57c	19c	How well read English
57d	19d	How well write English
58	--	Received special help in reading, writing, or speaking English
62a	62a	I feel good about myself
62b	--	I don't have enough control over the direction of my life
62c	62b	In my life, good luck is more important than hard work
62d	62c	I feel I am a person of worth, the equal of other people
62e	62d	I am able to do things as well as most other people
62f	62e	When I try to get ahead, somebody or something stops me
62g	62f	My plans hardly ever work out; planning makes me unhappy
62h	62h	On the whole, I am satisfied with myself
62i	--	I feel useless at times
62j	62j	At times I think I am no good at all
62k	62k	I am almost certain I can make my plans work
62l	62l	I feel I do not have much to be proud of
62m	--	Chance and luck are very important in my life
62n	--	I feel emotionally empty most of the time
63a	--	My parents treat me fairly

[1] Questions 55 and 55A should be combined in order to achieve comparability with language items in HS&B and NELS:88 base year. If the answer to 55A is "Yes", then question 55 would be comparable to HS&B items 11 and 15, and NELS:88 base year Q.18 and 22. If the answer to Q.55A is "No", then Q.55 can only be compared to HS&B Q.15 and NELS:88 base year Q.22.

[2] Questions 11, 15, and 19 are not from the main HS&B Sophomore Questionnaire, but from the Student Identification Pages; data appear on the HS&B base year Language File.

Question Number		Question Wording
NELS F1S #	**HS&B #**	
63b	--	I learn things quickly in English classes
63c	--	I have good friends who are members of my own sex
63d	--	Mathematics is one of my best subjects
63e	--	English is one of my best subjects
63f	--	I do not like my parents very much
63g	--	I get good marks in English
63h	--	I get a lot of attention from members of the opposite sex
63i	--	I get along well with my parents
63j	--	I have always done well in mathematics
63k	--	I make friends easily with girls
63l	--	I make friends easily with boys
63m	--	My parents are unhappy or disappointed with what I do
63n	--	I'm hopeless in English classes
63o	--	I do not get along very well with girls
63p	--	I do not get along very well with boys
63q	--	I get good marks in mathematics
63r	--	It is difficult to make friends with members of my own sex
63s	--	I do badly in tests of mathematics
63t	--	I'm not very popular with members of the opposite sex
63u	--	My parents understand me
64a	--	Chances will graduate from high school
64b	--	Chances will go to college
64c	--	Chances will have a job that pays well
64d	--	Chances will be able to own home
64e	--	Chances will have an enjoyable job
64f	--	Chances will have a happy family life
64g	--	Chances will stay in good health most of the time
64h	--	Chances will be able to live wherever want in country
64i	--	Chances will be respected in the community
64j	--	Chances will have good friends
64k	--	Chances life will turn out better than it has for parents
64l	--	Chances children will have a better life
67a	53a	Other students see me as popular
67b	53b	Other students see me as athletic
67c	53c	Other students see me as socially active
67d	53d	Other students see me as a good student
67e	53e	Other students see me as important
67f	53f	Other students see me as a trouble-maker
67g	53g	Other students see me as part of the leading crowd
69	--	How many close friends have dropped out of school
70a	--	Important to close friends to attend classes regularly
70b	--	Important to close friends to study
70c	--	Important to close friends to play sports
70d	--	Important to close friends to get good grades

Question Number		Question Wording
NELS F1S #	**HS&B #**	
70e	--	Important to close friends to be popular
70f	--	Important to close friends to finish high school
70g	--	Important to close friends to have a steady boy/girlfriend
70h	--	Important to close friends to be willing to party, get wild
70i	--	Important to close friends to continue their education
70j	--	Important to close friends to participate in religious activities
70k	--	Important to close friends to do community work, volunteer
70l	--	Important to close friends to have as steady job
71a	--	Person admire most is popular
71b	--	Person admire most is honest
71c	--	Person admire most dresses well
71d	--	Person admire most is intelligent
71e	--	Person admire most understands me
71f	--	Person admire most drives a nice car
71g	--	Person admire most has an important job
71h	--	Person admire most makes a lot of money
71i	--	Person admire most is good at sports
71j	--	Person admire most thinks about important things like I do
71k	--	I do not admire anyone
72	--	Relationship to person admire most
73	--	Age groups of friends
74	--	Important to be married before having sex
75	81	Consider having a child if not married
76	--	Have children of own
77	--	Cigarettes smoked daily
78a	--	Occasions drank alcoholic beverages in lifetime
78b	--	Occasions drank alcoholic beverages in the last year
78c	--	Occasions drank alcoholic beverages in the last month
79	--	Times had five or more drinks in a row in the last two weeks
80Aa	--	Occasions used marijuana in lifetime
80Ab	--	Occasions used marijuana in the last year
80Ac	--	Occasions used marijuana in the last month
80Ba	--	Occasions used cocaine in lifetime
80Bb	--	Occasions used cocaine in the last year
80Bc	--	Occasions used cocaine in the last month
81	92	Religious background
82	93	How often attended religious services in the past year
83	94	Think of self as religious person
84	--	Currently or ever employed
85	--	Hours worked per week
86	--	How many hours worked are on the weekend
87	27	Kind of work
88	--	Earnings per hour
89	98	Have a twin

Question Number		Question Wording
NELS F1S #	**HS&B #**	
90	97a,b	Number of older brothers and sisters
91	97d,e	Number of younger brothers and sisters
92a	36b	Father lives in the same household with me
92b,c	36c	Other adult male (stepfather) lives in the same household with me
92d	36d	Mother lives in the same household with me
92e,f	36e	Other adult female (stepmother) lives in same household with me
92g	36h	Husband/wife lives in the same household with me
92h	--	Boy/girlfriend lives in the same household with me
92i	36i	My child or children live in the same household with me
93a,b	36f*	Number of brothers/sisters living in the same household with me
93c	36g*	Number of grandparents living in same household with me
93d,e	36j*	Number of other relatives living in same household
93f,g	36k*	Number of non-relatives living in same household
94	--	How many brothers and sisters left school before graduating
95	--	Babysit own child, younger siblings, or other relatives
96	--	Hours per day responsible for their care
97	--	Days of school missed per month because babysitting
98a	--	I get along with all of the people in my family
98b	--	I don't get along with my father
98c	--	I don't get along with another male guardian
98d	--	I don't get along with my mother
98e	--	I don't get along with another female guardian
98f	--	I don't get along with my brother(s)
98g	--	I don't get along with my sister(s)
98h	--	I don't get along with my grandparent(s)
98i	--	I don't get along with other relative(s)
99a	--	My family moved to a new home
99b	--	One of my parents got married
99c	--	My parents got divorced or separated
99d	--	My mother lost her job
99e	--	My father lost his job
99f	--	My mother started to work
99g	--	My father started to work
99h	--	I became seriously ill or disabled
99i	--	My father died
99j	--	My mother died
99k	--	A close relative died
99l	--	One of my unmarried sisters got pregnant
99m	--	One of my brothers or sisters dropped out of school
99n	--	My family went on welfare
99o	--	My family went off welfare
99p	--	My family stayed on welfare
99q	--	A family member became seriously ill or disabled

Question Number		Question Wording
NELS F1S #	HS&B #	
99r	--	My family was homeless for a period of time
99s	--	None apply
100a	--	How often parents check on whether have done homework
100e	--	How often parents require work or chores around the home
100f	--	How often parents limit the time spent watching TV
100g	--	How often parents limit the time with friends on school nights
102a	--	How much my parents try to find out who my friends are
102b	--	How much my parents try to find out where I go at night
102c	--	How much my parents try to find out how I spend my money
102d	--	How much my parents try to find out what I do with my time
103	--	My parents know the parents of my closest friends
104a	--	Who decides how late at night I can stay out
104b	--	Who decides which friends I can spend time with
104c	--	Who decides what classes I take in school
104d	--	Who decides whether I have a job
104e	--	Who decides at what age I can leave school
104f	--	Who decides how I spend my money
104g	--	Who decides whether I can date
107a	--	How often parents received a warning about my attendance
107b	--	How often parents received a warning about my grades
107c	--	How often parents received a warning about my behavior
108a	--	My parents trust me to do what they expect
108b	--	I do not know WHY I am supposed to do what they tell me
108c	--	I often count on my parents to solve problems for me
108d	--	I think I will be a source of pride to my parents in the future
108e	--	My parents get along well with each other
108f	--	When I grow up I will have a family similar to my own
109	--	Ran away from home for a week or longer last two years

Listing of NCES Working Papers to Date

Number	Title	Contact
94-01	Schools and Staffing Survey (SASS) Papers Presented at Meetings of the American Statistical Association	Dan Kasprzyk
94-02	Generalized Variance Estimate for Schools and Staffing Survey (SASS)	Dan Kasprzyk
94-03	1991 Schools and Staffing Survey (SASS) Reinterview Response Variance Report	Dan Kasprzyk
94-04	The Accuracy of Teachers' Self-reports on their Postsecondary Education: Teacher Transcript Study, Schools and Staffing Survey	Dan Kasprzyk
94-05	Cost-of-Education Differentials Across the States	William Fowler
94-06	Six Papers on Teachers from the 1990-91 SASS and Other Related Surveys	Dan Kasprzyk
94-07	Data Comparability and Public Policy: New Interest in Public Library Data Papers Presented at Meetings of the American Statistical Association	Carrol Kindel
95-01	Schools and Staffing Survey: 1994 papers presented at the 1994 Meeting of the American Statistical Association	Dan Kasprzyk
95-02	QED Estimates of the 1990-91 Schools and Staffing Survey: Deriving and Comparing QED School Estimates with CCD Estimates	Dan Kasprzyk
95-03	Schools and Staffing Survey: 1990-91 SASS Cross-Questionnaire Analysis	Dan Kasprzyk

Listing of NCES Working Papers to Date (Continued)

Number	Title	Contact
95-04	National Education Longitudinal Study of 1988: Second Follow-up Questionnaire Content Areas and Research Issues	Jeffrey Owings
95-05	National Education Longitudinal Study of 1988: Conducting Trend Analyses of NLS-72, HS&B, and NELS:88 Seniors	Jeffrey Owings